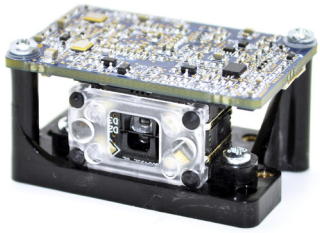
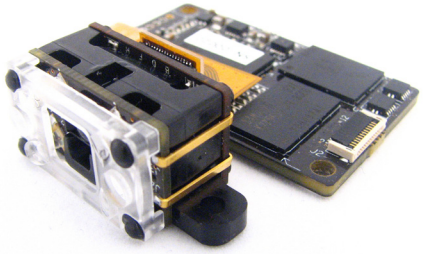
Code Reader 8000™ Scan Engine



(actual size is smaller)



Features & Benefits

- Dual field optics, both high density and wide field in the same unit
- Ultra fast microprocessor platform with world-class decoding platform
- Connectivity for Code's glare reduction technology
- Attachable illumination blocks for different applications
- Bright LED aiming mechanism
- Compact size fits any application
- Simple to setup and configure
- Customizable parsing routines using JavaScript
- On-board 128MB Flash ROM available for data/program storage
- Built in TTL RS232 or USB interface
- Optional mounting bracket

Overview

The Code Reader 8000 (CR8000) is a patented, high performance, miniature bar code imaging engine. The CR8000 continues Code's legacy of dual optical fields – while most devices have a single field enhanced for a specific application, Code's CR8000 has both a high density field for reading the smallest of bar codes, and a wide angle field for reading oversized bar codes giving you two readers in one.

The CR8000 includes connectivity for Code's Glare Reduction Technology. Bar codes printed on shiny or reflective surfaces have typically been problematic for imaging based bar code readers. Code has overcome this challenge with a patented process that significantly reduces the reflections thus making the bar codes easily identifiable. In addition, Code has designed in functionality to allow the integration and control of additional illumination blocks or elements. Applications includes document scanning, direct parts marking, or other applications that require expanding lighting.

For integration, a variety of mounting options are available including: tabs, blind through holes, and mounting brackets for both the scan engine and the decode board. The CR8000 draws significantly less current and gets into and out of its low power state faster than any other imager based scan engine. These 2 items are critical when integrating the engine into a mobile device, better power management from the imager equates to longer battery life for mobile devices. The CR8000 communicates via RS232 or USB protocols and runs Code's JavaScripts. A Software Developer's Kit and Integration Manual can be downloaded, free of charge, from Code's website.

Applications for the CR8000 include Medical Devices, ATMs, Price-lookup, Lottery, Age Verification, Direct Parts Marking and more.

Code Reader 8000™ Specifications

Physical Characteristics

CR8000 Dimensions:	0.81" W x 0.57" D x 0.47" H (20.6 mm W 14.5 mm D x 11.9 mm H)
CR8000 with Tabs Dimensions:	1.25" W x 0.57" D x 0.47" H (31.7 mm W x 14.5 mm D x 11.9 mm H)
Decode PCB:	1.54" W x 0.98" D x 0.30" H (39.0 mm W x 25.0 mm D x 7.5 mm H)
CR8000 with Tabs Weight:	0.10 oz. (3.0 g)
CR8000 and Decode PCB Weight:	0.17 oz. (5.0 g)
CR8000 Reader without Tabs Weight:	0.09 oz (3.0 g)

Performance Characteristics

Field of View:	High Density Field: 30° horizontal by 20° vertical Wide Field: 50° horizontal by 33.5° vertical
Focal Point:	High Density Field: approximately 100 mm Wide Field: approximately 115 mm
Sensor:	CMOS 1.2 Megapixel (1280 x 960) gray scale
Optical Resolution:	High Density Field: 960 x 640 Wide Field: 960 x 640
Pitch:	± 60° (from front to back)
Skew:	± 60° from plane parallel to symbol (side-to-side)
Rotational Tolerance:	± 180°
Print Contrast Res.:	25% (1D symbologies) or 35% (2D symbologies) absolute dark/light reflectance differential, measured at 650 nm
Target Beam:	Single, blue targeting bar
Ambient Light Immunity:	Sunlight: Up to 9,000ft-candles/96,890 lux
Shock:	Withstands multiple drops of 6' (1.8 Meters) to concrete in an enclosed housing
Power Requirements:	Reader @ 5vdc (mA): Typical = 303 mA; Idle = 57 mA; Sleep = 1.6 mA
Memory Capacity:	128MB Flash ROM, 32MB RAM
Communication Interfaces:	RS232, USB 2.0 (Generic HID, HID Keyboard, Virtual Com Port)

Accessories

- Available Ribbon Cables: 2.0" (50 mm), 6.0" (150 mm) and 12.0" (300 mm)
- Horizontal Decode PCB Mounting Bracket
- Custom Mounting Brackets available upon request

User Environment

Operating Temperature:	-20° to 55° C /- 4° to 131° F
Storage Temperature:	-30° to 65° C /- 22° to 150° F
Humidity:	5% to 95% non-condensing
Decode Capability:	**1D:** UPC/EAN/JAN, Code 39, Code 128, Interleaved 2 of 5, Codabar, GS1 DataBar (RSS), MSI Plessey, Code 11, Code 93, NEC 2 of 5, Matrix 2 of 5, Trioptic Code, Telepen, Hong Kong 2 of 5, Pharmacode **Stacked 1D**: PDF417, Micro PDF417, Codablock A & F, Composite Codes **2D:** Data Matrix, QR Code, Micro QR Code, Aztec Code, Maxicode **Proprietary 2D:** GoCode® (Additional License Required) **Postal:** USPS OneCode (4CB), POSTNET, PLANET, Japanese Post, Australian Post, Royal Mail, KIX Code
Image Output Options:	Formats: JPEG, PGM, Raw (Uncompressed)
Field Selection:	High-Density or Wide Field
Data Editing:	JavaScript (Additional License Required)

Working Ranges

CR8000 Performance		
Test Code	Min Inches (mm)	Max Inches (mm)
3 mil Code 39	3.7" (95 mm)	5.9" (150 mm)
7.5 mil Code 39	2.2" (55 mm)	8.0" (205 mm)
13 mil UPC	2.0" (50 mm)	10.8" (275 mm)
4.2 mil Data Matrix	3.7" (95 mm)	4.5" (115 mm)
5 mil Data Matrix	3.7" (95 mm)	5.1" (130 mm)
6.3 mil Data Matrix	3.1" (80 mm)	6.3" (160 mm)
10 mil Data Matrix	1.6" (40 mm)	7.7" (195 mm)
20.8 mil Data Matrix	1.6" (40 mm)	9.4" (240 mm)

Note: working ranges are a combination of both the wide and high density fields.

14870 S. Pony Express Rd. #200
Bluffdale, UT 84065
phone: (801) 495-2200 **fax:** (801) 495-0280
web: www.codecorp.com

Specifications subject to change without notice.

© 2011 Code Corporation. All rights reserved.